Operation Enduring Freedom

Analysis of VA Health Care Utilization -- Report 1

VHA Office of Public Health and Environmental Hazards, February 24, 2004

Summary

- Among 17,541 veterans of Operation Enduring Freedom who have separated from active military duty, 10.3% (1,798) have sought health care from the Department of Veterans Affairs (VA) since deployment.
- The 10.3% rate of VA health care utilization among veterans of the war in Afghanistan is comparable to the 11.6% rate of VA health care usage among a much larger population of 84,000 Iraqi Freedom veterans who have separated from active duty.
- Veterans of Operation Enduring Freedom have presented to the VA with a wide range of both medical and psychological conditions.
- Veterans of Operations Enduring Freedom and Iraqi Freedom have experienced nearly identical kinds of health problems since returning to the United States despite deployment to separate theaters of conflict.
- Because veterans of the conflicts in either Afghanistan or Iraq are presenting with a wide range of diagnoses, they should be assessed individually for all outstanding health problems.
- The Veterans Health Administration (VHA) will continue to monitor the health status of both Enduring Freedom and Iraqi Freedom veterans using updated deployment lists provided by DoD to ensure that VA tailors its health care programs to meet the needs of this newest generation of war veterans.

Lists of Recent War Veterans

VHA's Environmental Epidemiology Service (EES-135) has been working with DoD to obtain a complete roster of recent combat veterans. To date, the DoD Defense Manpower Data Center (DMDC) has created a preliminary file of the Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) troops using Active Duty and Reserve Pay files, and Combat Zone Tax Exclusion and Imminent Danger Pay data fields (Tables 1 and 2, and Figure 1).

On September 22, 2003, DoD sent EES the first partial list of Iraqi war veterans

who had "separated" from active duty but not the complete roster of deployed troops. Based on the initial list and subsequent updates, VA last issued an analysis of the health care utilization of Iraqi Freedom veterans on January 21, 2004.

The current analysis of Enduring Freedom veterans is based on a roster of separated military personnel provided to VA on February 12, 2004. This list contained basic military and demographic data on 17,541 service members who served in Operation Enduring Freedom since October 1, 2001: 3,164 active duty and 14,377 Reserve or National Guard unit members (Tables 1 and 2). The DoD file did not include actual date of separation but the last out—of-theater date was November 2003, for active duty personnel, and October 2003, for members of the Reserve/National Guard.

Of note, veterans captured in this analysis are not representative of deployed military personnel in general because almost 90% of eligible veterans have not presented to VA for health care. Evaluated veterans are more typical of young, active, healthcare-seeking populations. The following summary of diagnoses therefore does not represent an epidemiological study of all veterans recently deployed to Afghanistan but does provide important clinical information about health care utilization.

In addition, it is important to consider differences in demographic and deployment characteristics when comparing veterans of the war in Afghanistan with veterans of Operation Iraqi Freedom. As shown in table 2, a higher percentage of Afghan veterans compared to Iraqi veterans were officers (21% vs. 13%), Reserve/Guard personnel (82% vs. 70%), Air Force personnel (52% vs. 30%), and older than 30 years of age (67% vs. 50%). Moreover, nearly 1000 miles separates these two theaters of conflict, and lighter, more mobile forces were used in Afghanistan, with less reliance on tanks and heavy artillery.

VA Health Care Utilization

Among 17,541 veterans of Operation Enduring Freedom who have separated from active duty, 1,798 (10.3%) have sought health care from VA during fiscal years 2003 and 2004. Of these, only 36 (0.2%) had been hospitalized and all others had been seen as outpatients (Table 3). Among separated Afghan veterans, active duty troops, Army personnel, enlisted personnel, and women troops tended to utilize VA health care services more frequently (Tables 2 and 4).

In comparison, among 83,752 separated Iraqi Freedom veterans evaluated in the January 21, 2004, report, a similar percentage (11.6%) had sought health care at a VA medical facility during fiscal years 2003 and 2004.

Most Common Diagnoses Among Enduring Freedom Veterans

Veterans of Operation Enduring Freedom are presenting to the VA with a wide range of both medical and psychological conditions (Table 5). The diagnoses received by these veterans from VA health care providers were similar to those found in other populations of U.S. military men and women of this age group, and no particular diagnosis stood out as unusual.

Of particular importance, the most common diagnoses were exactly the same for broad ICD-9 categories among veterans of Operations Enduring Freedom and Iraqi Freedom. Moreover, the percentage of veterans with these diagnoses were almost identical:

Percentage of Veterans with Diagnosis

Most common ICD-9 diagnostic categories	Afghanistan	Iraq
Diseases of Musculoskeletal System	27 %	26 %
2. Diseases of Digestive System	23	24
3. Signs, Symptoms, Ill-Defined Conditions	19	17
4. Diseases of Nervous System	16	16
5. Mental Disorders	15	14

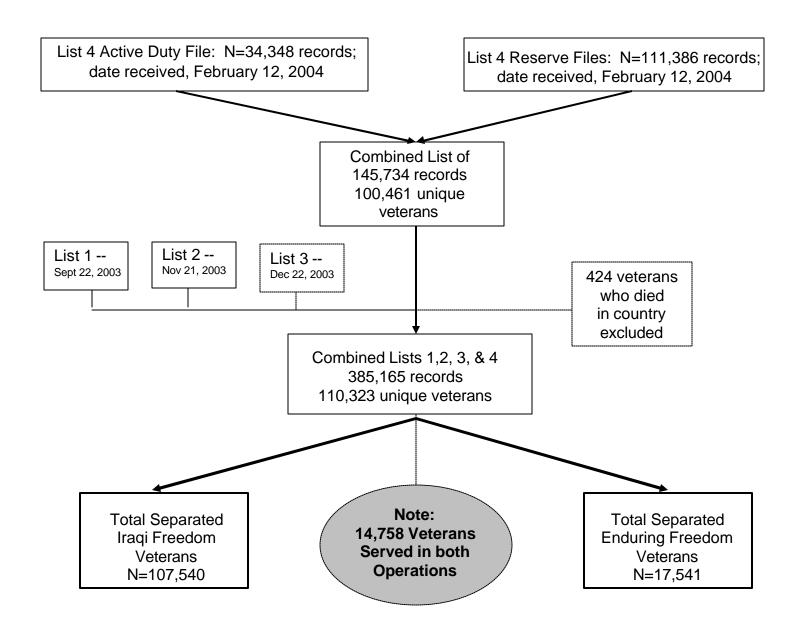
Within broad ICD-9 categories, the most common individual diagnoses were similar in the two groups of war veterans, although the number of veterans with particular diagnoses was much lower in the smaller population of Enduring Freedom veterans (Tables 6 to 20; VA Health Care of Veterans of Operation Iraqi Freedom: Analysis of Second Deployment List Update, January 21, 2004).

The types of diagnoses were the same among these two populations of war veterans despite the fact that most of them fought in different geographic locations, the Afghanistan deployment began before the Iraqi deployment, and there were differences in troop and military operational characteristics.

Figure 1

Separated Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) Veterans as of February 12, 2004

Prepared by VHA EES (135)



Combined Deployment Lists. Health Care Utilization, and Diagnostic Tables

Table 1 Distribution of Separated Personnel Identified on the DoD Lists¹ of **Enduring Freedom (OEF) and Iraqi Freedom (OIF) Participants** By Operation and Component Type

	Service Component Type		
Military Operation	Active Duty ²	Reserve/Guard ³	Total ⁴
Enduring Freedom	3,164	14,377	17,541
Male	2,807	13,198	16,005
Female	210	1,177	1,387
Unknown Gender	147	2	149
Iraqi Freedom	32,431	75,109	107,540
Male	28,900	68,056	96,956
Female	3,192	7,043	10,235
Unknown Gender	339	10	349
Total Veterans 5	34,247	76,076	110,323
Male	30,538	68,929	99,467
Female	3,329	7,136	10,465
Unknown	380	· 11	391

¹ DMDC approved lists received September 22, 2003, November 21, 2003, December 22, 2003, and February 12, 2004 were combined to generate a composite list of unique veterans.

Active duty group includes last out-of-country dates through November 2003.

³ Reserve/Guard group includes last out-of-country dates through October 2003.

⁴ This table excludes 424 veterans on the composite list who died in country.

⁵ 14,758 veterans served in both Operation Enduring Freedom and Operation Iraqi Freedom; therefore, the columns will not total correctly.

Table 2

Demographic and Military Characteristics of Separated Personnel Who
Served in Operation Enduring Freedom (OEF) and
Operation Iraqi Freedom (OIF)

		Opera	tion	
	Enduring (n=17,5		Iraqi Fre	
Characteristics	#	%	#	%
Sex				
Male	16,005	91.2	96,956	90.2
Female	1,387	7.9	10,235	9.5
Unknown	149	0.8	349	0.3
Race/ethnicity				
White	13,698	78.1	78,234	72.7
Black	1,620	9.2	14,001	13.0
Others	1,804	10.3	11,495	10.7
Unknown	419	2.4	3,810	3.5
Age Group				
< 20 years	12	0.1	372	0.3
20-29	5,532	31.5	53,043	49.3
30-39	5,750	32.8	28,155	26.2
=40	5,998	34.2	25,238	23.5
Unknown	249	1.4	732	0.7
Branch				
Air Force	9,066	51.7	32,065	29.8
Army	7,451	42.5	38,705	36.0
Coast Guard	9	0.1	353	0.3
Marine	231	1.3	19,840	18.4
Navy	784	4.5	16,577	15.4
Unit Type				
Active Duty	3,164	18.0	32,431	30.2
Reserve/Guard	14,377	82.0	75,109	69.8
Rank				
Enlisted	13,924	79.4	93.186	86.7
Officer	3,617	20.6	14,354	13.3

Combined data received through February 12, 2003, provided to VA by DMDC. Troops who died in country are excluded from these data.

Table 3 FY 2003-2004 VA Health Care Visits As of February 13, 2004, for 17,541 Enduring Freedom Veterans Identified On the Combined DoD List

	Enduring Freedo (n = 17,	
Treatment Category	Frequency	%
Ever Treated at a VAMC during FY 2003/04		
Yes No	1,798 15,743	10.3 89.7
Inpatient Stays Only Hospitalized at Least Once at a VAMC during FY 2003/04		
Yes No	36 17,505	0.2 ¹ 99.8
Number of Times Hospitalized at a VAMC during FY 2003/04		
1	31	86.1 ²
2	4	11.1
3+	1	2.8
(Mean Number of Hospitalizations at a VAMC during FY 2003/04 = 1.2)		
Outpatient Visits Only Seen as an Outpatient at a VAMC		
At Least Once during FY 2003/04		
Yes	1,798	10.3 ¹
No	15,743	89.7
Number of Days Seen as an Outpatient at a VAMC during FY 2003/04		
1	679	37.8 ³
2-10	966	53.7
11+	153	8.5
(Mean Number of Visits to a VAMC for Outpatient Treatment during FY 2003/04 = 4.3	3)	

¹ Percent based on total number of eligible veterans (17,541)
² Percent based on total number of hospitalized veterans (36)
³ Percent based on total number of veterans with one or more outpatient visits (1,798)

Table 4

Demographic and Military Characteristics of Separated Personnel Who Served in Operation Enduring Freedom (OEF) and Used VA Healthcare in FY 2003-2004

Operation Enduring (n=1,798)		
Characteristics	#	%
Sex		
Male	1,605	89.3
Female	193	10.7
Race/ethnicity		
White	1,226	68.2
Black	216	12.0
Others	321	17.9
Unknown	35	1.9
Age Group		
< 20 years	4	0.2
20-29	682	37.9
30-39	469	26.1
=40	643	35.8
Branch		
Air Force	499	27.8
Army	1,209	67.2
Coast Guard	0	
Marine	23	1.3
Navy	67	3.7
Unit Type		
Active Duty	515	28.6
Reserve/Guard	1,283	71.4
Rank		
Enlisted	1,565	87.0
Officer	233	13.0

Table 5 Diagnoses by Broad ICD-9 Categories for the 1,798 Enduring Freedom Veterans Evaluated at a VA Healthcare Facility During FY 2003-2004¹

	Enduring Freedom Veterans (n = 1,798)	
Diagnosis (ICD-9 Categories)	Frequency ²	%
Infectious and Parasitic Diseases (001-139)	123	6.8
Malignant Neoplasms (140-208)	15	0.8
Benign Neoplasms (210-239)	43	2.4
Diseases of Endocrine/Nutritional/ Metabolic Systems (240-279)	215	12.0
Diseases of Blood and Blood Forming Organs (280-289)	13	0.7
Mental Disorders (290-319)	262	14.6
Diseases of Nervous System/ Sense Organs (320-389)	279	15.5
Diseases of Circulatory System (390-459)	189	10.5
Disease of Respiratory System (460-519)	245	13.6
Disease of Digestive System (520-579)	413	23.0
Diseases of Genitourinary System (580-629)	104	5.8
Diseases of Skin (680-709)	159	8.8
Diseases of Musculoskeletal System Connective System (710-739)	478	26.6
Symptoms, Signs and Ill Defined Conditions (780-799)	341	19.0
Injury/Poisonings (800-999)	201	11.2

Hospitalizations and outpatient visits as of 2/13/04.
 Veterans can have multiple diagnoses with each healthcare encounter. However, a veteran is counted only once in any single Diagnostic Category but can be counted in multiple categories.

Infectious and Parasitic Diseases

(ICD-9 001-139)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Dermatophytosis (110)	43
Other Diseases due to Viruses and Chlamydiae (078)	26
Herpes Simplex (054)	11
Other Venereal Diseases (099)	8
Dermatomycosis (111)	6
Viral Hepatitis (070)	5
Malaria (084)	5
Other Bacterial Infections (041)	4
Viral Infections, in Conditions Classified Elsewhere	
& Unspecified (079)	4
Candidiasis (112)	4

Malignant Neoplasms

(ICD-9 140-209)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Non-melanoma Skin Cancer (173)	6
Cancer of the Testis (186)	3
Cancer of the Prostate (185)	2
Myeloid Leukemia (205)	2
Malignant Melanoma (172)	1
Malignant Neoplasm of Eye (190)	1
Malignant Neoplasms of Ill-defined Sites (195)	1
Other Malignant Neoplasms of Lymphoid Tissue (202)	1

Benign Neoplasms

(ICD-9 210-239)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Benign Neoplasm of Skin (216)	14
Lipoma (214)	7
Neoplasm of Uncertain Behavior of Unspec.	
Sites/Tissues (238)	7
Benign Neoplasm of Parts Digestive System NEC (211)	6
Benign Neoplasm of Lip, Oral Cavity, and Pharynx (210)	2
Neoplasm of Unspecified Nature (239)	2
Benign Neoplasm of Respiratory Organs (212)	1
Benign Neoplasm of Bone and Cartilage (213)	1
Benign Neoplasm of the Breast (217)	1
Uterine Leiomyoma (218)	1

Table 9

Diseases of Endocrine, Nutritional, and Metabolic Systems

(ICD-9 240-279)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code) **Number of Veterans** Disorders of Lipid Metabolism (272) 157 Obesity (278) 38 Diabetes Mellitus (250) 21 Acquired Hypothyroidism (244) 20 Gout (274) 10 Disorders of Carbohydrate Transport and Metabolism (271) 3 3 Disorders of Fluid, Electrolyte and Acid-base Balance (276) Simple Goiter (240) 2 Thyrotoxicosis with or without Goiter (242) 2 Testicular Dysfunction (257) 2

Table 10

Diseases of Blood and Blood Forming Organs

(ICD-9 280-289)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans	
Other Unspecified Anemias (285)	7	
Diseases of the White Blood Cells (288)	2	
Iron Deficiency Anemia (280)	1	
Other Deficiency Anemias (281)	1	
Hereditary Hemolytic Anemias (282)	1	
Coagulation Defects (286)	1	

Mental Disorders

(ICD-9 290-319)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Adjustment Reaction (309)	87
Nondependent Abuse of Drugs (305)	82
Depressive Disorders (311)	68
Neurotic Disorders (300)	60
Affective Psychoses (296)	46
Alcohol Dependence Syndrome (303)	19
Special Symptoms, Not Elsewhere Classified (307)	12
Sexual Deviations and Disorders (302)	11
Personality Disorders (301)	7
Transient Organic Psychotic Conditions (293)	6

Table 12

Diseases of the Nervous System and Sense Organs

(ICD-9 320-389)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Deafness (389)	98
Disorders of Refraction and Accommodation (367)	56
Other Disorders of Ear (388)	55
Disorders of External Ear (380)	25
Suppurative & Unspecified Otitis Media (382)	19
Disorders of Conjunctiva (372)	18
Migraine (346)	15
Mononeuritis of Lower Limb (355)	14
Visual Disturburbances (368)	14
Mononeuritis of Upper Limb & Multiplex (354)	9

Table 13

Diseases of the Circulatory System

(ICD-9 390-459)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Essential Hypertension (401)	135
Hemorrhoids (455)	20
Cardiac Dysrhythmias (427)	12
Chronic Ischemic Heart Disease (414)	9
Angina Pectoris (413)	5
Other Diseases of the Endocardium (424)	5
Diseases of Capillaries (448)	4
Acute III-defined Cerebrovascular Disease (436)	3
Late Effects of Cerebrovascular Disease (438)	3
Atherosclerosis (440)	3

Table 14

Diseases of the Respiratory System

(ICD-9 460-519)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Allergic Rhinitis (477)	63
Acute Upper Respiratory Infections (465)	59
Chronic Sinusitis (473)	40
Acute Pharyngitis (462)	33
Asthma (493)	23
Acute Bronchitis (466)	20
Acute Sinusitis (461)	17
Deviated Nasal Septum (470)	10
Bronchitis (NOS) (490)	10
Chronic Pharyngitis and/or Nasopharyngitis (472)	9

Table 15

Diseases of the Digestive System

(ICD-9 520-579)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Diseases of Teeth & Supporting Structure NEC (525)	230
Gingival and Periodontal Diseases (523)	176
Diseases of Hard Tissues of Teeth (521)	158
Diseases of Esophagus (530)	98
Diseases of Pulp and Periapical Tissues (522)	27
Dentofacial Anomalies (524)	16
Functional Digestive Disorders (564)	16
Inguinal Hernia (550)	13
Diseases of Tooth Development and Eruption (520)	12
Gastritis and Duodenitis (535)	10

Table 16

Diseases of Genitourinary System

(ICD-9 580-629)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Other Disorders of Urethra (599)	28
Disorders of Penis (607)	15
Hyperplasia of Prostate (600)	11
Calculus of Kidney and Ureter (592)	7
Inflammatory Disorders of Cervcix (622)	7
Hydrocele (603)	6
Inflammatory Diseases of Cervix, Vagina, and Vulva (616)	6
Disorders of Menstruation (626)	6
Orchitis and Epididymitis (604)	5
Other Disorders of Male Genital Organs (608)	4

Table 17

Diseases of the Skin

(ICD-9 680-709)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Contact Dermatitis and Other Eczema (692)	52
Diseases of Sebaceous Glands (706)	20
Other Skin Disorders (709)	19
Diseases of Hair and Hair Follicles (704)	17
Cellulitis (682)	12
Corns and Callosities (700)	12
Psoriasis (696)	10
Other Dermatoses (702)	10
Atopic Dermatitis (691)	8
Erythematous Conditions (695)	7

Table 18

Diseases of Musculoskeletal System and Connective Tissue (ICD-9 710-739)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3 Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code)	Number of Veterans
Unspecified Joint Disorder (719)	210
Unspecified Back Disorder (724)	170
Osteoarthrosis (715)	80
Other Disorders of Soft Tissues (729)	64
Peripheral Enthesopathies (726)	54
Intervertebral Disc Disorders (722)	41
Other Disorders of Cervical Region (723)	31
Other and Inspec. Arthropathies (716)	29
Disorders of Muscle, Ligament, and Fascia (728)	26
Internal Derangement of Knee (717)	25

Symptoms, Signs and III-Defined Conditions

(ICD-9 780-799)¹

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Disease Category (ICD code) Number of Veterans² General Symptoms (780) 79 Symptoms Involving Head and Neck (784) 57 Symptoms involving Respiratory System (786) 52 Symptoms Involving Skin (782) 41 Symptoms Involving Digestive System (787) 31 Nonspecific Abnormal Results of Function Studies (794) 30 Symptoms involving Abdomen and Pelvis (789) 26 Other III-defined and Unknown Causes of Morbidity (799) 22 Nonspecific Abnormal Histological and Immunologic Findings (795) 18 Other Nonspecific Abnormal Findings (796) 18

The diagnostic category, "Symptoms, Signs and III-Defined Conditions," includes symptoms, signs, illnesses, and abnormal laboratory results or other investigative abnormalities, which are not coded elsewhere in the IDC-9-CM. It is important to note that the "Symptoms, Signs, and III-Defined Conditions" category is not a diagnosis of an unusual or mystery illness. This diagnostic classification encompasses more than 160 sub-categories and primarily consists of common symptoms or isolated laboratory abnormalities.

² Data from the combined separation files from September 22, 2003, November 21, 2003, December 22, 2003, and February 12, 2004.

Injury and Poisonings

(ICD-9 800-999)

Enduring Freedom Veterans Evaluated at VA Facilities Ranked By the Frequency of 3-Digit ICD Diagnostic Codes For the 10 Most Frequent Codes for that Category

Number of Veterans Disease Category (ICD code) Unspecified Injury (959) 26 Sprains and Strains of Shoulder and Upper Arm (840) 17 Sprains and Strains of Ankle and Foot (845) 17 Sprains and Strains of Ill-defined Nature (848) 16 Sprains and Strains of Parts of Back NEC (847) 13 Certain Adverse Effects from External Causes NEC (995) 12 Sprains and Strains of the Knee and Leg (844) 10 Fracture of Unspecified Bones (829) 9 Dislocation of Knee (836) 9 Other Open Wound of Head (873) 9